I here purposely omit the mention of the practice of temporary cultivation called "júm," "bewar," "kúmri," "toungyá," because there are other questions and considerations involved, which we are not, in the present stage of our study, in a position to discuss. The matter will be fully dealt with in a later section.

SECTION II.—THE EXTENT OF THE NECESSARY LIMITATION OF FOREST RIGHTS.

§ 1.—*It must permit the maintenance of the forest in a satisfactory state.*

A question will naturally arise regarding this principle. Granted that a certain regulation of rights is justly admissible on a true understanding of the nature of a forest right, to what extent can this limitation proceed without giving rise to a claim for compensation?

This must, especially in a country like India, depend to a great extent on the merits and circumstances of each particular case. The general rule is that the right can always, without compensation, be restricted to what the forest will bear, without either (*a*) injuring it if it is at present in a good state, or (*b*) preventing its restoration and improvement if it is in a bad state. When it comes to the question how must rights be regulated in any given forest, of course the forest will have been professionally examined and reported on; and it will then be known what portions of it can be left open to, and what must be closed against, the exercise of grazing or of any other right; what quantity of wood can be given to right-holders, and what cannot.

The Forest Settlement Officer will naturally require all this to be explained and justified to him, and there may be of course some discussion and reference to higher forest authority, or to the orders of Government, before the matter is settled. But however that may be, it (the question whether a given forest can or cannot properly bear such and such rights) is ultimately a question of fact, which must necessarily be decided on the basis of the best professional advice which is available.

§ 2.—*Under what sort of management is the forest to be put?*

Here at once, I think, it will be evident that the question what amount of grazing and wood-cutting or other rights a forest can *properly bear without being injured,* is dependent on *what sort of management* the forest is to be kept under. If I am content with a very low standard of management, it is obvious that I need not require nearly so much restraint on rights, as if I desire to adopt a very perfect or high standard of management. Consequently, the question how far it is lawful and reasonable to regulate rights in a forest, depends very greatly on this further question—what degree of excellence in management is the forest-owner entitled to be allowed to attain? Given, that standard, rights must be regulated to such an extent as will enable him to attain it.

This will be understood by an example in the concrete form. It will be easily admitted that if I have, say, an oak forest, in order that I may work and utilise it properly, I must always be allowed to have a certain area closed against grazing, so that the requisite area of seedlings and young growth may be given a fair chance of coming up. I must also require that the whole of the acorns which fall, are not grubbed up by pigs under a right of "pawnage," or I should have no seedlings. Here it is easy to decide that the terms I demand for the management of my forest are moderate; having an oak forest, I merely demand what suffices to maintain it as an oak forest, in a proper gradation of ages; consequently the limitation of rights asked is only just and reasonable. But supposing I desire to put my forest under treatment to change acre after acre into pine forest? Here I shall virtually deprive the right-holders of the necessary material altogether. There will soon be no acorns, and the grass will be very much less, if any at all remains. Suppose, further, that this conversion should be a great improvement, a step which largely increases the value of the forest to the public,—can I limit rights to the extent which will enable me to carry it out? Or take another case. It is often highly to the interest of forest conservancy to convert a *coppice* forest into a *high-timber* forest; can I at once make the necessary cutting, so that

after it is done there will be nothing left to satisfy rights to firewood which may previously have existed ?

§ 3.—*Different answers propounded.*

In some systems of law it is maintained that the exercise of rights can never extend to prevent "that scientific and thorough management of a forest which has for its object the largest permanent yield of the most valuable kind of timber." In that case the above questions would be answered in the affirmative.

It is, however, difficult to agree to this conclusion. Such a rule seems to err by looking too exclusively at one side. The value of the rights, as conducing to the welfare of the population, must also be taken into consideration. When that is done, it may at once appear that a high production of the most valuable timber may show the greatest positive income, and yet the forest may not be producing what, in the largest economic sense of the term, is the most valuable return[3].

The production of the direct revenue to the State is of great importance, and of such obvious value that no one is likely to underrate it[4]. But revenue is not the only thing to be considered. It may happen that a forest kept partly for grazing and partly for wood may be the most practically valuable, and may best answer the end of public forest estates considered from a broad point of view.

Dr. Pfeil remarks that in the beech forests of the Danube provinces, the feeding of animals on the beech-mast is of more value than the wood; and that even resin production may be of the same extensive value.

[3] See this well explained by Pfeil (p. 7, § 3). He puts it:—"*Dass man leicht die Holzerzeugung vermehren, und doch den Gesammtertrag des Waldbodens für das national einkommen vermindern.*"

[4] And I may take this opportunity of calling the attention of students to the fallacy of those complaints, which one sometimes sees in public prints, that forests should be retained with the "selfish object of filling the treasury"—as if Government was a private company, whose treasury was for its own enjoyment; and as if the revenue from forests did not always *pro tanto* save the people at large from having to *pay taxes*, to make up the same amount, if the forests did not yield it.

§ 4.—*The answer accepted.*

It is evidently then a principle to be accepted in India, that both sides must be considered, and that such a management of the forest must be allowed, and such conversion and improvement of the forest provided for, as is in each individual case consistent with a thorough respect for *all* the conditions.

And the meaning of the Indian Act, where it speaks (section 15) of the "maintenance of the forest," or the "due maintenance and improvement" of the forest, will be generally found conformable to this principle, if it is interpreted to mean (1) the *maintenance of the forest in a normal condition, such as is proper to a well-managed forest of its kind*, whether a high-timber forest (in the case of teak [5], or sál, or deodar, or other trees usually of timber dimensions), or to a coppice forest, such as a "rakh," or fuel reserve, and so forth; and (2) *if the forest is in a bad or ruined condition* (the result of fires, over-cutting, over-grazing, or any other cause), *its improvement, by partial closing, planting, and other recognised methods of restoration.*

If the forest is in a fairly good state to start with, the regulation of rights must extend to what is needed for keeping it in a good state: its reproduction must be allowed, and provision made for attaining the object of all forest management, namely, the establishment of a graduated scale of ages, a properly proportionate area of the whole area being occupied by each.

If the forest is *not* in a good state to start with, rights must be so regulated as to facilitate its restoration.

In such cases the remarks of Eding will be found applicable [7]: "It is always admissible for the forest proprietor to place under management a forest not yet subjected to a regular periodical working; and he should then be allowed to divide his forest (according

[5] Speaking generally, in some parts, and especially where teak begins to pass its natural geographical zone of effective production, it appears to produce only *poles*, and then coppice forest *may* be its normal condition. But I do not know that our knowledge as yet enables me to say this positively.

[7] Eding, page 87.

to the opinion of professional foresters) into compartments to be successively worked (*Schläge*) and to keep a certain number of them closed against grazing. And so in an altogether ruined forest, the owner may always divide it into compartments for treatment, and keep a portion of them closed, provided he makes his division in such a way as to afford proper space for the feeding of the cattle which the right-holder is reasonably entitled to pasture.

And if it is asked whether, under the head of "restoring" a forest, I conclude the change of a coppice forest into a high-timber forest, I reply in the affirmative, because the advantage to the State may be very great. But I am led to this answer because such a plan of conversion *can* be carried out gradually, or perhaps over part only of the whole area; and as provision *can* be made for firewood rights, and as grazing is not affected materially, there is no reason to include such a conversion among those total and complete changes of management which virtually diminish the enjoyment of rights beyond what is fair, and therefore give rise to a claim for compensation. This opinion is supported by the continental authorities. In all such cases the working plan, or forest cultivation plan, will be so arranged as to close portions of the forest only at one time, so that rights can be exercised in the other parts[8]. Both sides will be considered and arrangements made accordingly[9]. If it were not possible to effect such a change from an inferior to a higher standard of management without materially interfering

[7] See also Roth, § 266, and authority quoted. The right of grazing cannot prevent the conversion of a waste (*ödung*) into a forest by planting (or into any other useful property, meadow, orchard, &c.) So the Saxon Mandat of 1813, § 15; only the conversion must be piece by piece, to allow the rights to go on, otherwise compensation has to be awarded.

[8] See *Schenk Forstrecht*, § 189, and the Saxon law (Mandat of 1813), § 11.

[9] It would also follow that a right-holder can never demand a change in the management from good to bad. For example, a grazier cannot desire that the method of "selection-cutting" (of single trees or small groups), where it is proper, should be exchanged for "clearance-cutting," *i.e.*, felling by large clearances, so that more grass may grow. See Meaume, Volume I, page 373, § 292, and, to the same effect, Roth, §§ 226-271.

with the rights, I should certainly say that it could not be undertaken; unless, indeed, it were determined by authority to be so desirable, that it was necessary to proceed to the expropriation and compensation of the rights of user.

What the precise application of such data is to be in any given case must, as I have said before, be ultimately dependent on a decision based on the reports and opinions of professional foresters.

If the state of the forest is such that the area which must be closed [10] leaves the extent of the available portion too small to provide for the rights to a reasonable extent, or if the extent of the rights is such that any sufficient closing of the forest would seriously interfere with them, then the provisions of the law relating to the commutation of the rights must be applied.

§ 5.—*Case where a very high standard of management is desirable.*

It may be added generally, also, that if it is desired to go beyond a merely sufficient and naturally indicated forest management, and produce a more valuable class of products, then the necessity of such a case must be judged of by the Government, or the rights must be bought out.

This would be the case where an area at the head-waters of a stream, or necessary for some protective purpose, required to be absolutely closed, or entirely replanted, at once. Such a case of necessity needs no comment. In these cases even *private* property in the forests may be interfered with, and therefore *à fortiori* rights of user, where the property is that of Government.

Speaking generally, however, of cases where no such exceptional necessity is apparent, and where only it can be said that it is highly desirable, for revenue purposes or for trade interests, to alter the management and the class of forest, then this cannot be admitted to the detriment of rights, *i.e.*, if it requires more restriction on

[10] Remarks as to ascertaining the proportion of forests to be closed to grazing, and on the area of different forest soils which different kinds of cattle require per head, will be found in a later section on Forest Rights, under the head of 'A.—Grazing."

them, than a normal business-like management of the forest would involve [1].

§ 6.—*Can rights be limited beyond the ordinary standard, even on compensation?*

It may also be asked whether in such a case the improvement

[1] As to the case of turning an oak or deciduous forest into a coniferous forest (which produces less grass) see the remarks of Eding (page 93). The loss of grass in quantity may be counterbalanced to some extent by the less area of the forest which needs to be closed against grazing in a conifer forest. The circumstances of the case must be considered. A complete change cannot be made if, under given circumstances, it would seriously or unfairly injure the right-holders. von Berg (page 186) gives authorities for drawing a distinction between the cases of limitation of rights (1) where it is necessary for the existence of the forest in a normal condition, and (2) where it is necessary to enable the management to be altered to one by which the *very most* can be made out of the estate. In the first he shows (as above established) that limitation is always admissible; in the second case, that at least the rights have to be compensated.

The Bavarian law (March 1852, § 23) requires that the forest-owner should not change the management of the forest (that is, the normal business-like management) to the detriment of rights, without giving notice to the right-holders, and if they show that real loss will accrue to them, paying due compensation. In March 1878, the (English) Journal of Forestry noted (without, however, giving the name and reference) a case tried at law, in which, in an oak-coppice forest, one person had the right to cut the coppice poles (and it would have been just the same if he had been the owner of the forest, cutting his own wood), and another the right to feed pigs on the acorns that fell. The latter objected that if the coppice were cut, no acorns would fall, and his right to feed pigs would virtually fail and be reduced to nothing. (Allusion to this case will also be found in the "Indian Forester," Vol. III, page 341.) No precedent could be found, but it was decided that the person entitled to the acorns could only have what were on the ground, and that he could not deprive the other of his right to cut the coppice. On the principle above stated, it would have been put, that the right of pawnage could not interfere with a reasonable and organised exercise of the cutting; but that the cutting should not be done all at once and over the whole forest simultaneously, so as to reduce the other right more than in the nature of the case was necessary. The report is only general, and I have little doubt that this is what is meant.

The English law allows the lord of the manor to close portions of the common for plantation (Cooke, p. 69) or for protection of young growth in woodlands (Cooke, p. 43). But in both cases the rights must not be materially interfered with, *i.e.*, the rest of the common left open must be sufficient (see also Williams, pp. 146—151).

The matter is, however, of so little importance in England, that the books give only a very cursory notice of the subject; and they have evidently so little considered the question, in the light in which it arises in India, that the authority of the books is not very satisfactory.